REMARKS

The enclosed is responsive to the Examiner's Final Office Action mailed on November 28, 2007. At the time the Examiner mailed the Office Action claims 1-18 and 30-43, were pending. By way of the present response Applicants have: 1) amended claims 1, 3, 7-10, 13, 16-18, 30, 38, and 41-42; and 2) added no claims; and 3) canceled no claims. As such, claims 1-18 and 30-43 are now pending. Support for the amendments can be found at least in paragraphs [0002], [0003], [0016], and the originally filed claims and specifications. No new matter has been added. Applicants respectfully request reconsideration of the present application and allowance of all claims now presented.

Applicants reserve all rights with respect to the applicability of the doctrine of equivalents.

Please note that MPEP 707.07 (f) requires that the Examiner answer all material traversed. **MPEP 707.07 (f) specifically states that "where the applicant traverses** any rejection**, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and** answer the substance of it." **Applicant respectfully requests that the Examiner respond to all of applicant's remarks traversing the following rejections, if such rejections are to be substantially maintained.**

The Final Rejection of 11/28/07 fails to address all the arguments presented by the Applicant. For example, Applicants assert that none of the references cited in the rejection disclose or suggest an activation temperature above the normal operating temperature of the carrier substrate. The Examiner has argued that such a limitation is a functional limitation, thus ignoring the limitation and Applicants' remarks on pages 11-13. MPEP 2173.05(g)

require that all limitations must be considered, regardless if they are functional limitations or not. Furthermore, Applicants' remarks on 9-17-07 discuss how different specific formulations of thermochromatic materials result in different activation temperatures. Thus, one cannot change the activation temperature of a thermochromatic material without changing its formulation, i.e. changing its structural composition. Using the Examiner's reasoning one could assert that limitations of a conductor or an insulator are just functional limitations of a material, and thus can be ignored by the Examiner. There are structural and material differences conductors and insulators, and cannot be properly ignored. Similarly, there are structural and material differences in thermochromatic materials having different activation temperatures, and likewise cannot be properly ignored. The Final Rejection of 11-28-07 merely states in response "that this is an obvious functional limitation because thermochromatic material is known as a temperature sensitive dye that changes colors when a certain temperature limit is reached," which is just the definition of the activation temperature. The Final Rejection is non-responsive because it concludes that the specific required activation temperature of the thermochromatic material is an "obvious functional limitation" because thermochromatic materials are known to have activation temperatures, which is circular and appears to have no relevance to the issues of functional limitations. Applicants respectfully request that the Examiner address this and other similar issues in full.

Independent claims 1 and 30, have been rejected three times under 102 rejections by three different references, and then rejected a third time under a 103 rejection with a third primary reference. Similarly all the other independent and dependent claims are also rejected repeatedly by different references.

Under MPEP 706.02 (I), only the "best available art" is to be used in making a rejection. Similarly, under 37 CFR 1.104, "in rejecting claims" only the "best available art" is to be used. Further, PTO's policy is against making multiple rejections of the same claims, since it is a waste of resources for both Applicant and PTO, and can lead to abuses. If the Examiner has a sound rejection, then there clearly is no legitimate reason for making additional rejections. However, if the Examiner's rejection is weak, the Examiner should not try to employ additional rejections, with the hope of sustaining one of the rejections. Such a strategy is improper and violates MPEP 706.02 (I) and 37 CFR 1.104. Applicant requests that the Examiner refrain from multiple rejections and limit rejections to **only** the "best available art."

35 U.S.C. § 102(e) and 35 U.S.C. § 102(b) Rejections

Claims 1, 2, 9, 30-34, 41 and 43 have been rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,872,453 to Arnaud et al. (hereinafter "Arnaud"). In light of the amendment, the Examiner's rejections have become moot. Nonetheless, the following remarks regarding the Examiner's rejections and the amended claims may be helpful to expedite prosecution.

Claim 1 relates to the limitations that the thermochromatic material is **selected** to have its activation temperature **above the normal operating temperatures** of the **carrier substrate electrically coupled** to the heat generating component, and wherein the solder mask layer is **transparent** and part of the visible surface **overlaying the thermochromatic** material

adjacent to the **carrier substrate.** In contrast, Arnaud appears to disclose a sun switch, which switches on and off depending upon the temperature. As discussed in part in previous responses, the normal operating temperatures of the sun switch must be above the switching temperature of the thermochromatic material in order for the switch to operate as intended. In fact Arnaud teaches away from the activation temperature being above the normal operating temperature of the sun switch because it would render the sun switch inoperable for which it were designed. Arnaud fails to disclose or suggest all the limitations claimed

In view of the above remarks, a specific discussion of the dependent claims is considered to be unnecessary. Therefore, Applicants' silence regarding any dependent claim is not to be interpreted as agreement with, or acquiescence to, the rejection of such claim or as waiving any argument regarding that claim. Nonetheless, the following remarks regarding the Examiner's rejections and the amended claims may be helpful to expedite prosecution.

There is no disclosure or suggestion to mix the solder layer and the thermochromatic materials together, nor would it be obvious to do so because there is no disclosure or suggestion of a solder mask layer, nor a motivation suggested by any of the prior art of record to do so.

Applicant, accordingly, respectfully requests withdrawal of the rejections of claims 1, 2, 9, 30-31, 34, 41 and 43 under 35 U.S.C. § 102(b) as being anticipated by "Arnaud".

Claims 1-2, 6, 9, 30-31, 34, 41 and 43 have been rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,229,514 to Larson (hereinafter "Larson").

In light of the amendment and the above remarks, the Examiner's rejections have become moot. Nonetheless, the following remarks regarding the Examiner's rejections and the amended claims may be helpful to expedite prosecution.

Larson relates to a display, which as discussed at least in part in previous responses, has an activation temperature within the normal operating temperatures of the display, otherwise the display would be inoperable by definition.

In view of the above remarks, a specific discussion of the dependent claims is considered to be unnecessary. Therefore, Applicants' silence regarding any dependent claim is not to be interpreted as agreement with, or acquiescence to, the rejection of such claim or as waiving any argument regarding that claim.

Applicant, accordingly, respectfully requests withdrawal of the rejections of claims 11-2, 6, 9, 30-31, 34, 41 and 43 under 35 U.S.C. § 102(b) as being anticipated by "Larson".

Claims 1-3, 6, 9 -13 and 17-18, 30-31, 38 and 41-43 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,922,242 to Parker (hereinafter "Parker"). In light of the amendment, the Examiner's rejections have become moot. Nonetheless, the following remarks regarding the Examiner's rejections and the amended claims may be helpful to expedite prosecution.

Similar to Larson, Parker also discloses a display, which is similarly defective, as discussed in part in previous responses.

In view of the above remarks, a specific discussion of the dependent claims is considered to be unnecessary. Therefore, Applicants' silence regarding any dependent claim is not to be interpreted as agreement with, or acquiescence to, the rejection of such claim or as waiving any argument regarding that claim.

Applicant, accordingly, respectfully requests withdrawal of the rejections of claims 1-3, 6, 9 -13 and 17-18, 30-31, 38 and 41-43 under 35 U.S.C. § 102(b) as being anticipated by "Parker".

35 U.S.C. § 103(a) Rejections

Claims 1-18 and 30-40 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Parker or Arnaud or Larson in view of U.S. Patent No. 6,880,396 to Rait (hereinafter "Rait"). In light of the amendment and the above remarks, the Examiner's rejections have become moot. Nonetheless, the following remarks regarding the Examiner's rejections and the amended claims may be helpful to expedite prosecution.

As discussed in part previously, Rait relates to a level indicator of a liquid container, which is not a carrier substrate with electrically coupled heat generating components. Rait fails to remedy the deficiencies of all three references and teaches away from claim 1 because its activation temperature is designed to operate with in the normal operating temperatures of the "carrier substrate," which is suggested to be the indicator. Clearly the indicator would be inoperable if its activation temperature was above its normal operating temperatures.

In view of the above remarks, a specific discussion of the dependent claims is considered to be unnecessary. Therefore, Applicants' silence regarding any dependent claim is not to be interpreted as agreement with, or acquiescence to, the rejection of such claim or as waiving any argument regarding that claim.

Applicant, accordingly, respectfully requests withdrawal of the rejections of claims 1-18 and 30-40 under 35 U.S.C. § 103(a) as being unpatentable over "Parker" or "Arnaud" or "Larson" in view of "Rait".

CONCLUSION

Applicant respectfully submits that the present application is in condition for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call Mr. Neal Berezny at (408) 720-8300 or Mr. Michael A. Bernadicou at (408) 720-8300.

Pursuant to 37 C.F.R. 1.136(a)(3), applicant(s) hereby request and authorize the U.S. Patent and Trademark Office to (1) treat any concurrent or future reply that requires a petition for extension of time as incorporating a petition for extension of time for the appropriate length of time and (2) charge all required fees, including extension of time fees and fees under 37 C.F.R. 1.16 and 1.17, to Deposit Account No. 02-2666.

Respectfully submitted,
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